FIG. 1

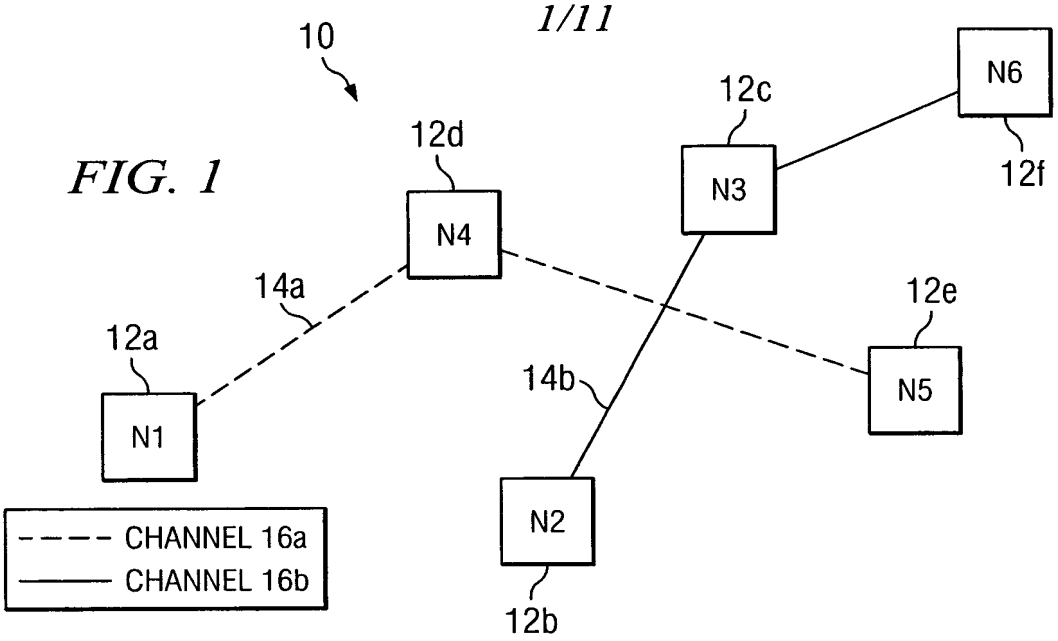


FIG. 2

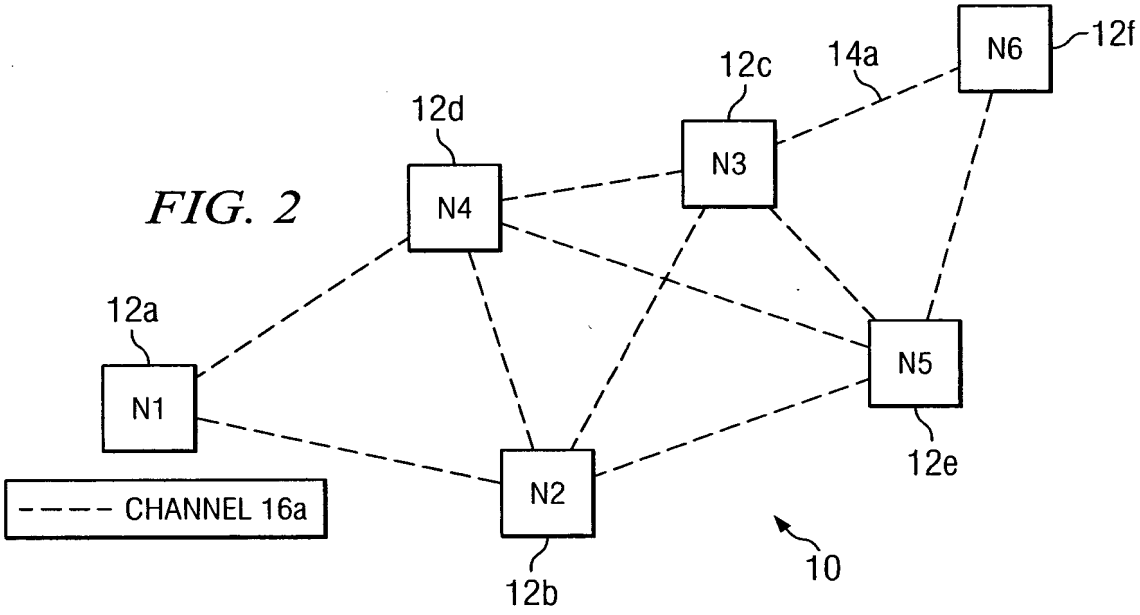


FIG. 3

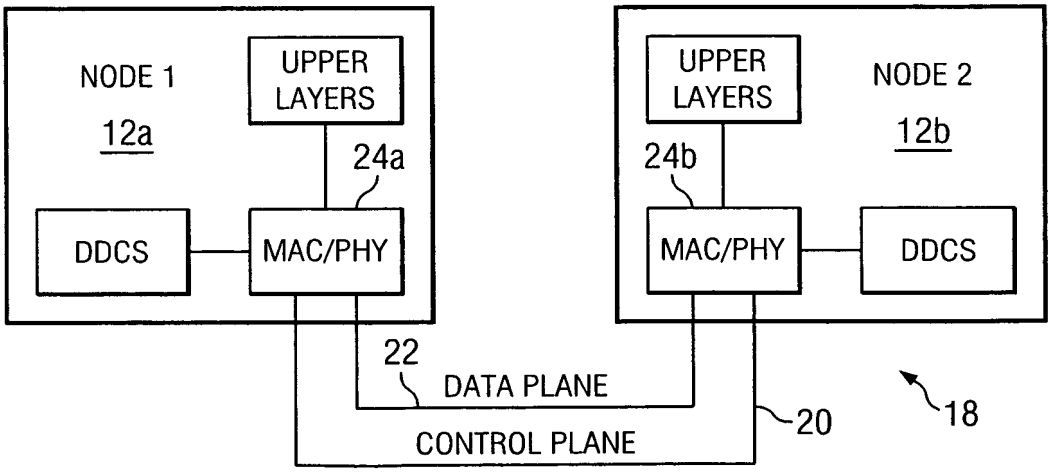


FIG. 4

PROBING NODE	RECEIVING NODE
HOMED	HOMED
HOMED	VISITING WITH HOME CHANNEL
HOMED	VISITING WITHOUT HOME CHANNEL
VISITING WITH HOME CHANNEL	HOMED
VISITING WITHOUT HOME CHANNEL	HOMED
VISITING WITH HOME CHANNEL	VISITING WITH HOME CHANNEL
VISITING WITH HOME CHANNEL	VISITING WITHOUT HOME CHANNEL
VISITING WITHOUT HOME CHANNEL	VISITING WITH HOME CHANNEL
VISITING WITHOUT HOME CHANNEL	VISITING WITHOUT HOME CHANNEL

FIG. 5

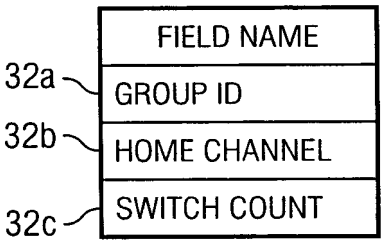


FIG. 6B

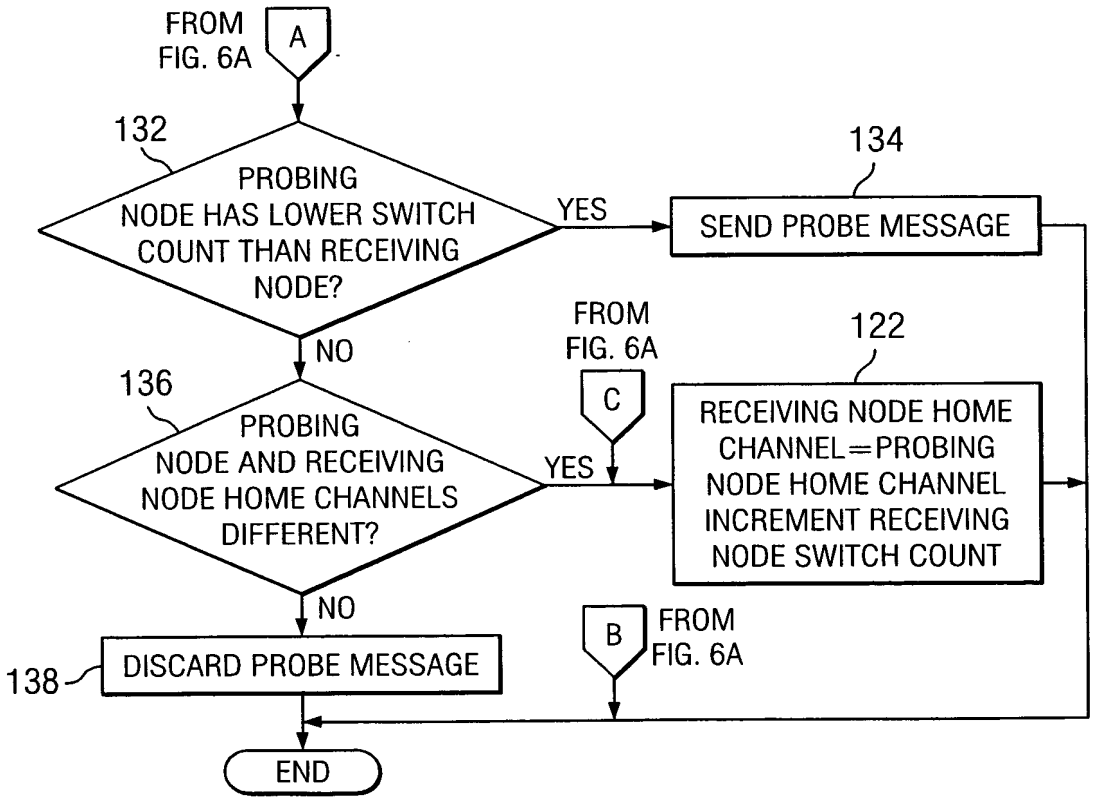


FIG. 6A

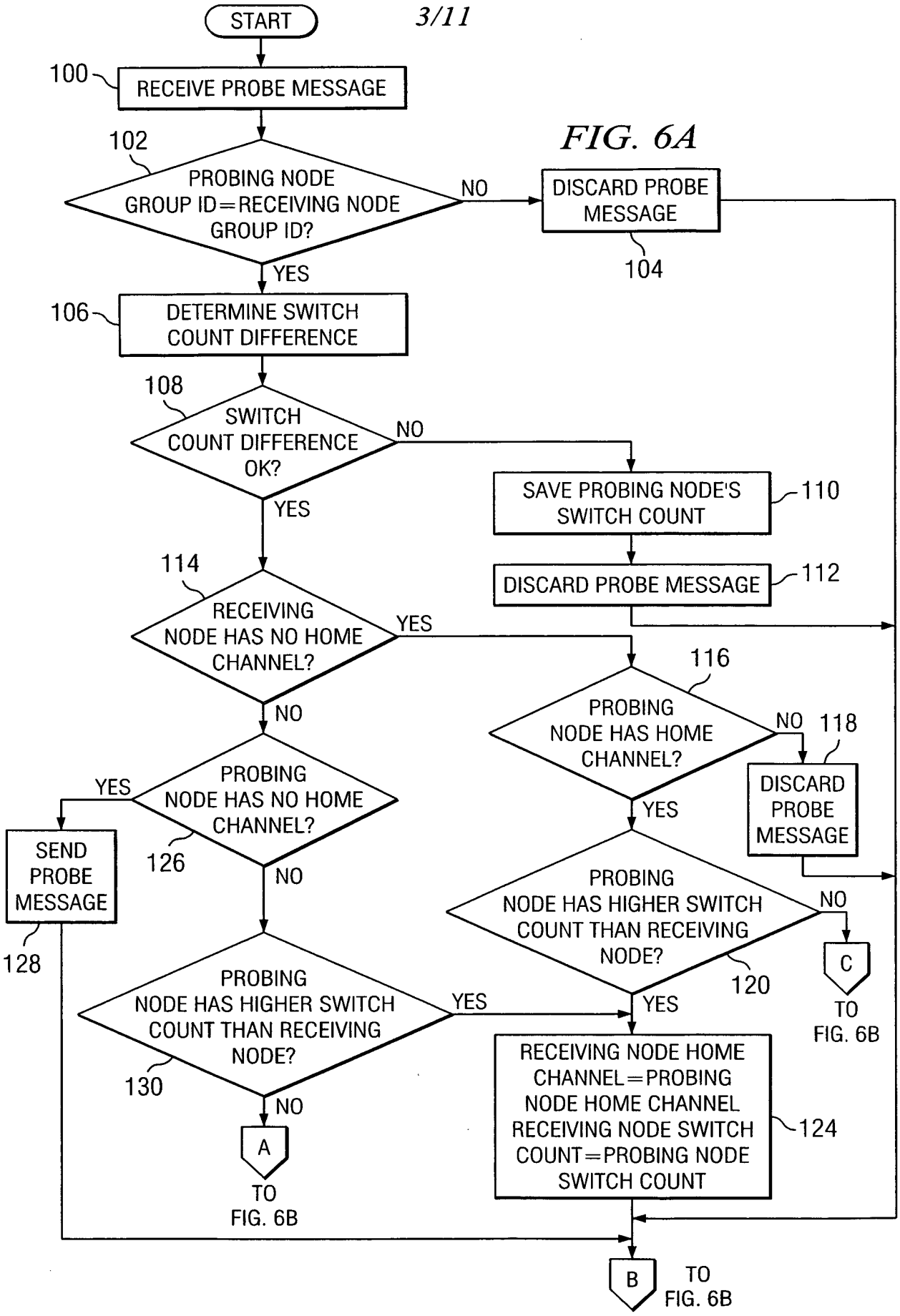

START
100
RECEIVE PROBE MESSAGE
102
PROBING NODE GROUP ID=RECEIVING NODE GROUP ID?
NO
DISCARD PROBE MESSAGE
104
YES
106
DETERMINE SWITCH COUNT DIFFERENCE
108
SWITCH COUNT DIFFERENCE OK?
NO
SAVE PROBING NODE'S SWITCH COUNT
110
YES
DISCARD PROBE MESSAGE
112
114
RECEIVING NODE HAS NO HOME CHANNEL?
YES
116
PROBING NODE HAS HOME CHANNEL?
NO
118
DISCARD PROBE MESSAGE
NO
PROBING NODE HAS NO HOME CHANNEL?
YES
126
SEND PROBE MESSAGE
128
NO
PROBING NODE HAS HIGHER SWITCH COUNT THAN RECEIVING NODE?
NO
C
TO FIG. 6B
120
YES
PROBING NODE HAS HIGHER SWITCH COUNT THAN RECEIVING NODE?
YES
130
NO
A
TO FIG. 6B
RECEIVING NODE HOME CHANNEL=PROBING NODE HOME CHANNEL RECEIVING NODE SWITCH COUNT=PROBING NODE SWITCH COUNT
124
B
TO FIG. 6B

FIG. 7

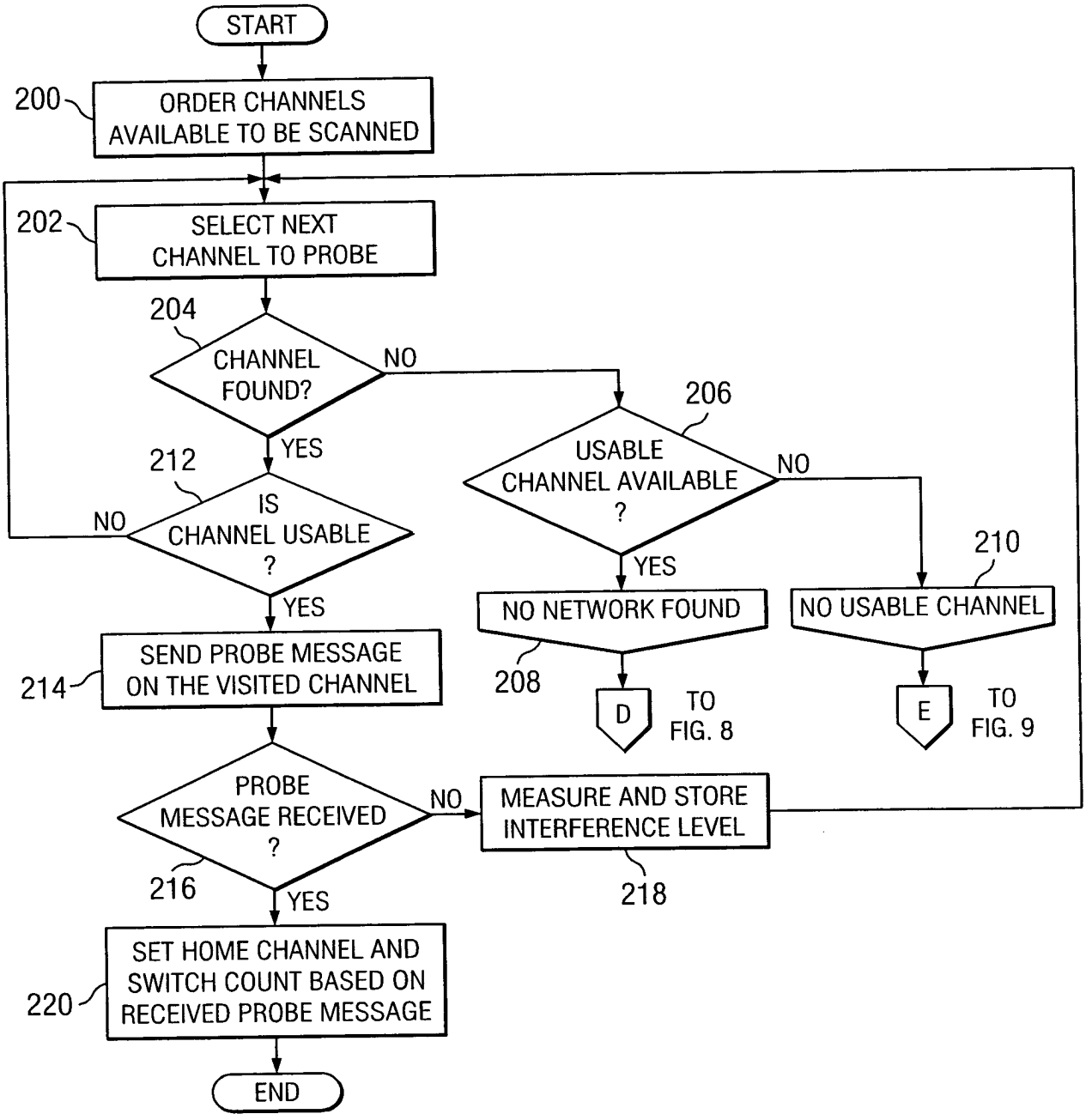

START
200
ORDER CHANNELS AVAILABLE TO BE SCANNED
202
SELECT NEXT CHANNEL TO PROBE
204
CHANNEL FOUND?
NO
YES
206
USABLE CHANNEL AVAILABLE ?
NO
YES
212
IS CHANNEL USABLE ?
NO
YES
210
NO NETWORK FOUND
NO USABLE CHANNEL
208
D
TO FIG. 8
E
TO FIG. 9
214
SEND PROBE MESSAGE ON THE VISITED CHANNEL
PROBE MESSAGE RECEIVED ?
NO
MEASURE AND STORE INTERFERENCE LEVEL
216
218
YES
220
SET HOME CHANNEL AND SWITCH COUNT BASED ON RECEIVED PROBE MESSAGE
END

FIG. 10

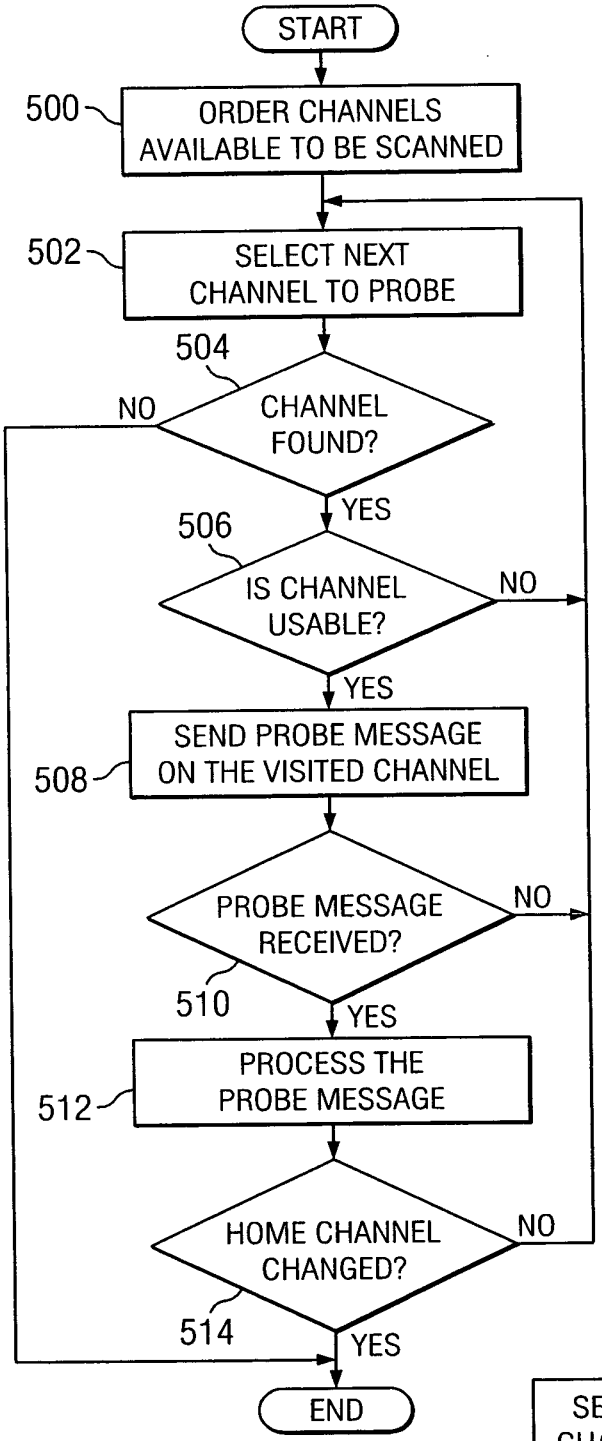


FIG. 9

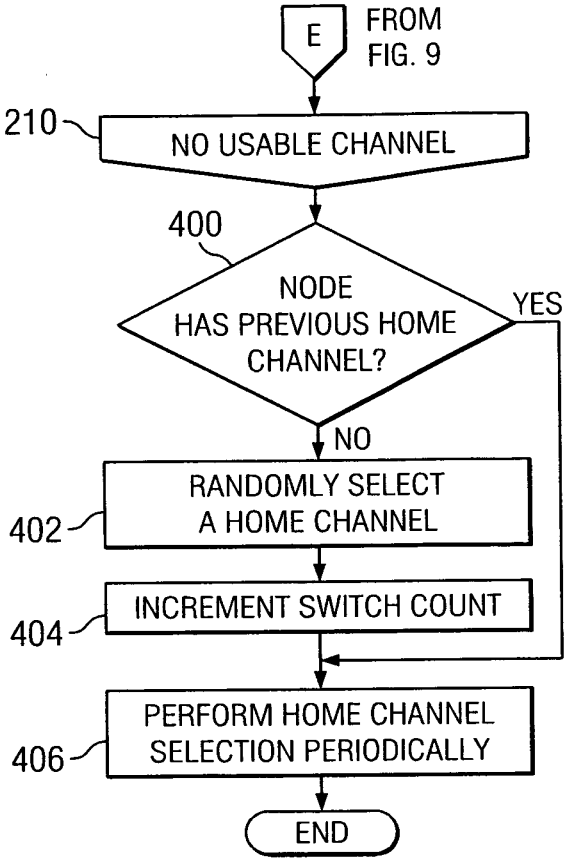


FIG. 8

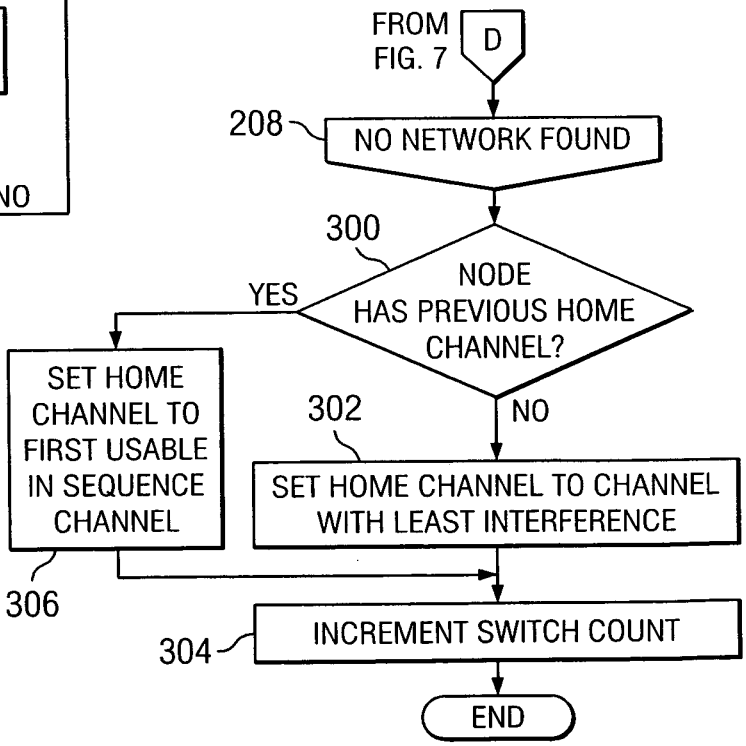


FIG. 11A

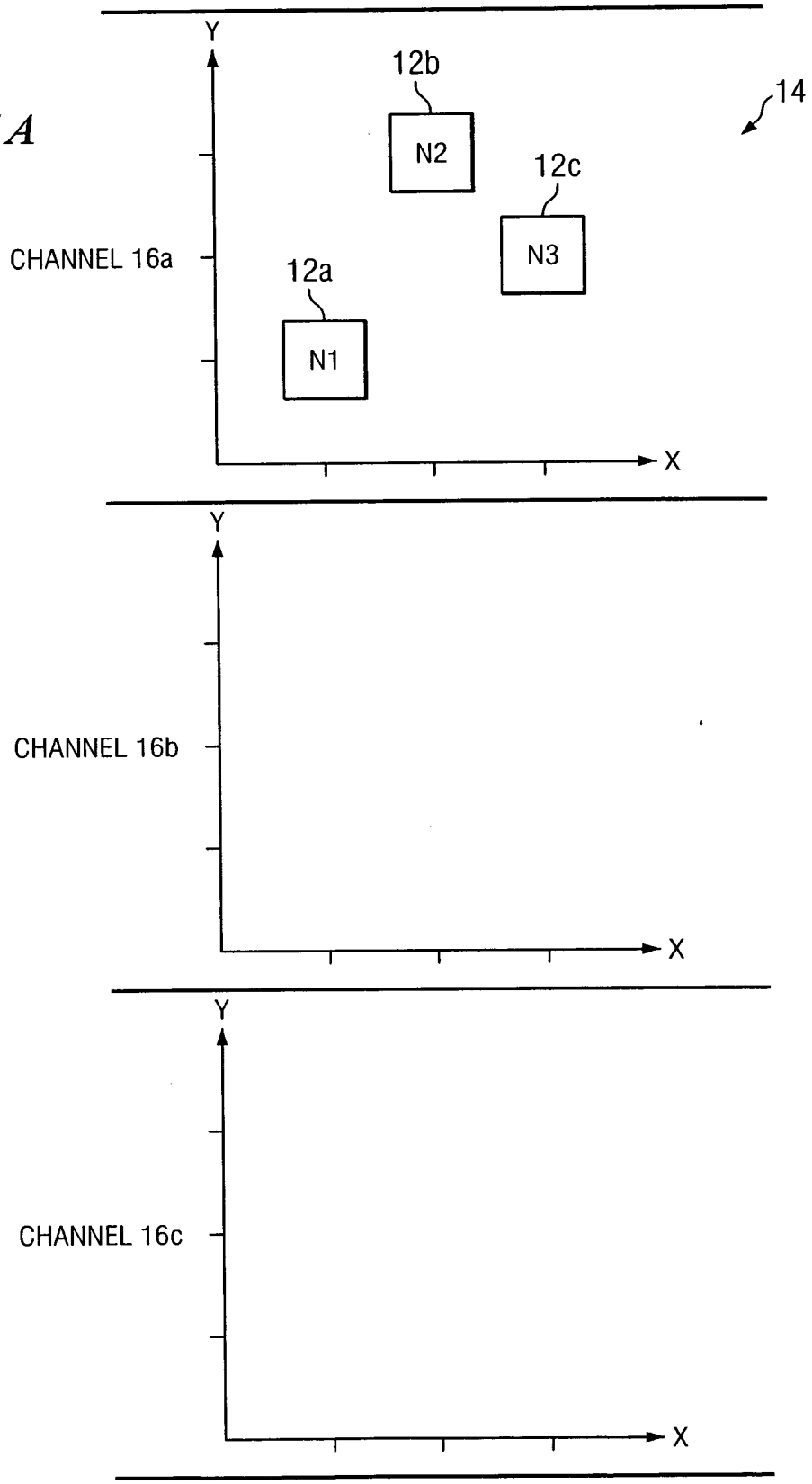

Y
12b
14
N2
12c
N3
CHANNEL 16a
12a
N1
X
Y
CHANNEL 16b
X
Y
CHANNEL 16c
X

FIG. 11B

DDCS	HOME CHANNEL	GROUP ID	SWITCH COUNT
NODE 12a	16a	22	2
NODE 12b	16a	22	2
NODE 12c	16a	22	2

FIG. 11E

DDCS	HOME CHANNEL	GROUP ID	SWITCH COUNT
NODE 12a	16a	22	2
NODE 12b	16b	22	3
NODE 12c	16c	22	3

FIG. 11G

DDCS	HOME CHANNEL	GROUP ID	SWITCH COUNT
NODE 12a	16a	22	2
NODE 12b	16c	22	3
NODE 12c	16c	22	3

FIG. 11I

DDCS	HOME CHANNEL	GROUP ID	SWITCH COUNT
NODE 12a	16c	22	3
NODE 12b	16c	22	3
NODE 12c	16c	22	3

FIG. 11C

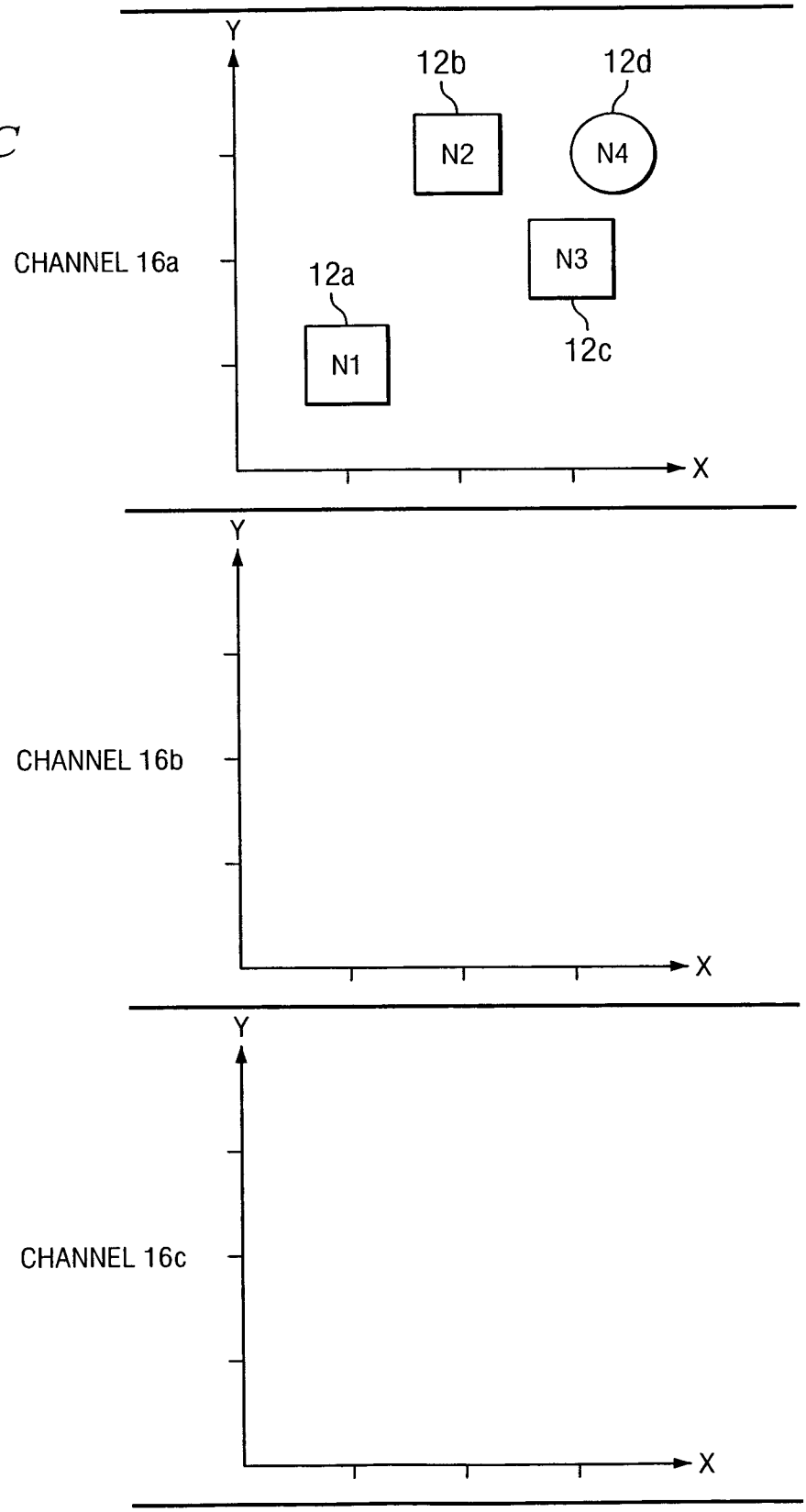

Y
12b
12d
N2
N4
N3
CHANNEL 16a
12a
N1
12c
X
Y
CHANNEL 16b
X
Y
CHANNEL 16c
X

FIG. 11D

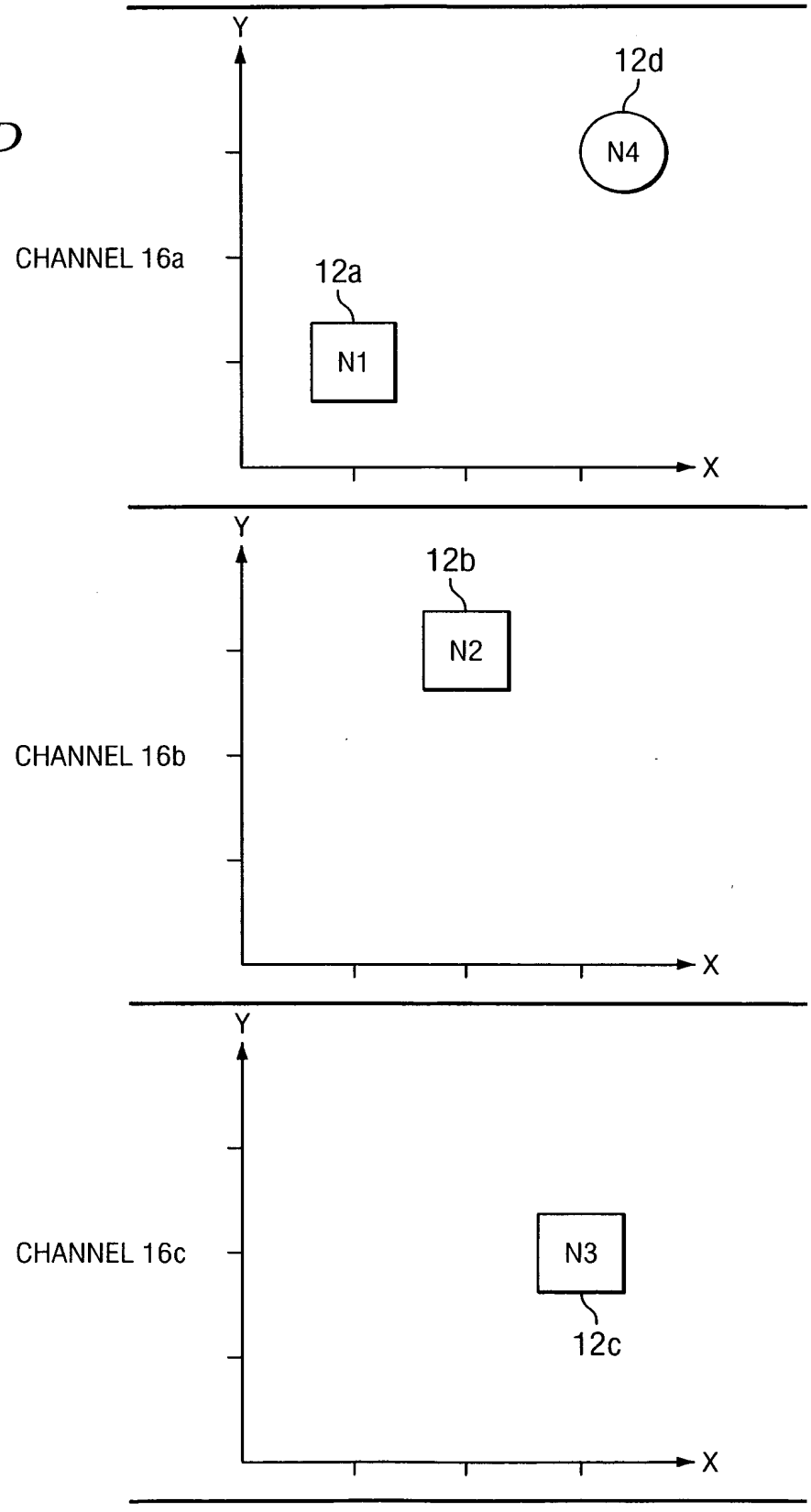

Y
12d
N4
CHANNEL 16a
12a
N1
X
Y
12b
N2
CHANNEL 16b
X
Y
CHANNEL 16c
N3
12c
X

FIG. 11F

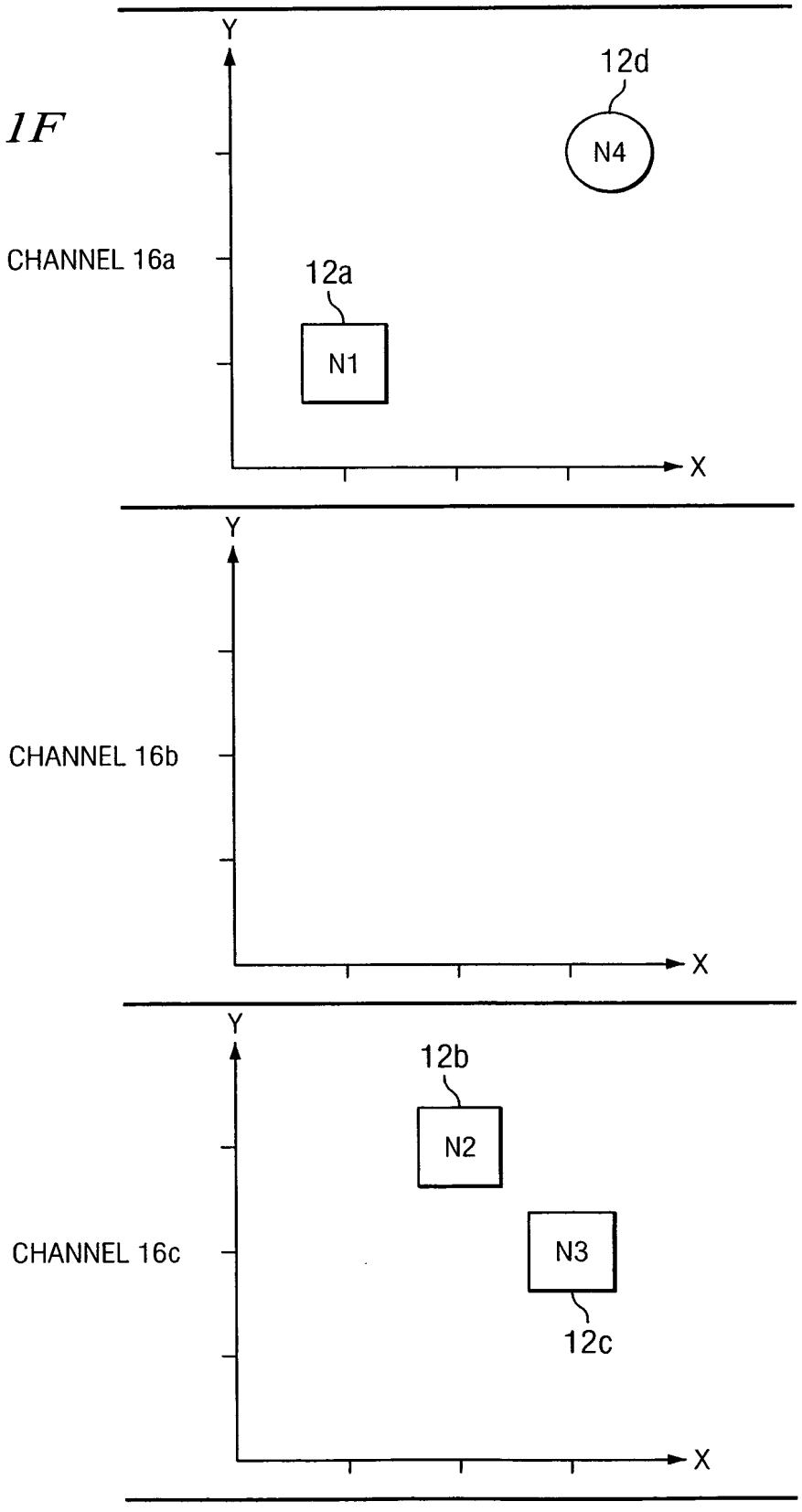
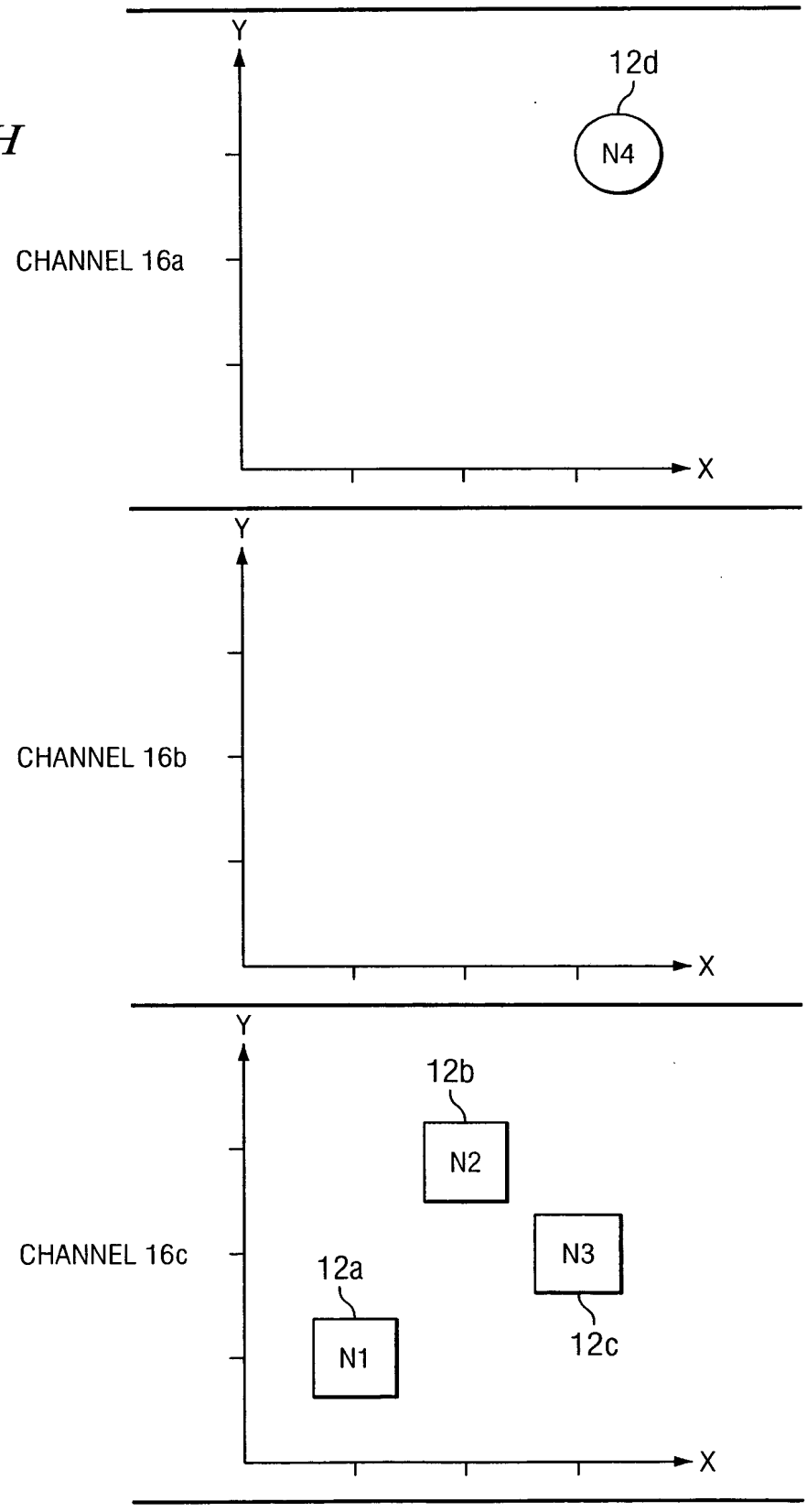

Y
12d
N4
CHANNEL 16a
12a
N1
X
Y
CHANNEL 16b
X
Y
12b
N2
CHANNEL 16c
N3
12c
X

FIG. 11H


Y
12d
N4
CHANNEL 16a
X
Y
CHANNEL 16b
X
Y
12b
N2
N3
CHANNEL 16c
12a
N1
12c
X